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ABSTRACTS

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Mechanism of Weltmann Reaction.—The Weltmann serum coagulation reaction differs from other nonspecific tests for the presence of inflammation in that it is used in an attempt to differentiate between exudative and proliferative reactions. The test is performed by adding 0.1 cc. of clear blood serum to each of 10 test tubes containing 5 cc. of varying concentrations of calcium chloride arranged in decreasing amounts, from left to right, ranging, in arithmetical proportion, from 0.1 per cent to 0.01 per cent calcium chloride content. These tubes are then heated in boiling water for fifteen minutes after which the test is read. The number of tubes showing evidence of flocculation (not turbidity) constitutes the so-called coagulation band (C. B.). Coagulation in normal serum occurs quite constantly in the first six tubes. In exudative conditions there is a shift to the left, fewer tubes being involved, whereas in proliferative states more tubes than the first six show flocculation, a shift to the right. The Weltmann test involves two variables—the concentration of the electrolyte (calcium chloride) and the type of serum used. Varying the amount of serum used in the test resulted in practically no variation of the C.B. This indicates that the essential factor in producing the wide variations which may be found in the coagulation band is not the absolute amount of serum or of calcium chloride, nor the dilution of the serum in the calcium chloride solution. The length of the coagulation band apparently depends upon qualitative rather than quantitative changes in the blood serum. It will be noted that other cations, such as barium or magnesium chloride, also produce a coagulation band. A study of the composition of the plasma proteins by means of the electrophoretic method of Tiselius, although revealing no apparent relationship between the C.B. and the percentage of albumin, beta-globulin and gamma-globulin fractions in the blood serum, did show, however, that where the values for alpha-globulin were high, the coagulation bands were short and where the bands were long, the values for alpha-globulin were low. Apparently there is an inverse relationship between the percentage of alpha-globulin and the length of the C.B. This relationship may not be a direct one, nor is the Weltmann reaction recommended as the measure of the percentage of alpha-globulin in the blood, but it seems clear that, although the Weltmann reaction may be influenced by a number of variables in the blood serum, it is closely associated with variations in the percentage of the alpha-globulin fraction.—*Investigation into the Mechanism of the Weltmann Serum Coagulation Reaction, S. Scherlis & D. S. Levy, Bull. Johns Hopkins Hosp., July, 1942, 71: 24.*—(*J. S. W.*)

Pleural Lymphatics.—Thorium oxide (thorotrast) was injected into the pleural space of various animals and its distribution was studied by radiological and histological examination. It appeared in the diaphragmatic sulcus, over the surface of the lung and in the interlobar fissures. Accumulations of thorotrast were in lymph nodes, lymph spaces and vessels of the chest wall, pleura and mediastinum, but there was practically none within the pulmonary parenchyma. In rabbits in which

by intrapleural injection of talc or other substances an aseptic pleuritis had been produced much less thorotrast was absorbed. Histologically it was seen that some thorotrast was able to pass the lymphatics which were filled with talc; however, it remained in the periphery of the lymph vessels and nodes. A similar picture was observed when the thorotrast was injected following the production of tuberculosis by intrapleural injection.—*The Lymphatic Drainage of the Pleura as Demonstrated by Thorotrast, J. J. Singer, California & West. Med., Tuberculosis Supplement, July, 1942, 57: 28.*—(*G. C. L.*)

Sugar in Pleural Effusions.—Pinner and Moerke (1930) in their comprehensive study of pleural effusions occurring in the course of artificial pneumothorax treatment conclude that neither chemical nor serological data afford *per se* dependable diagnostic or prognostic criteria. Most other investigators share this view. The present study deals with the relation of the presence of free sugar to the results of cultural examination for tubercle bacilli in pleural effusions. The conclusions reached were that a high sugar content of a pleural effusion, generally over 70 mg. per cent, is a prognostically favorable sign, indicating that the effusion is in all probability sterile or if it contains tubercle bacilli absorption may be expected within six to eight weeks. On the other hand, a low sugar content, under 50 mg. per cent, almost invariably indicates the presence of tubercle bacilli in the effusion and absorption is usually delayed or empyema may ensue.—*Diagnostic and Prognostic Value of Estimations of the Free Sugar in Pleural Effusions, E. Nassau, Tubercle, October, 1941, 22: 249.*—(*E. H. R.*)

Branching Forms of Tubercle Bacilli.—Branching forms of tubercle bacilli have been observed by many investigators in cultures of the avian type but few have discovered similar forms in the mammalian variety. When such arrangements are seen, they are assumed to be fortuitous. On the basis of detailed observations, the author describes definite and complex branching forms of tubercle bacilli in sputum of patients with pulmonary tuberculosis. The results obtained were in large measure due to the adoption of picric acid as a counterstain. Equally interesting are the author's observations on the effect of environment on the growth of the tubercle bacillus with particular regard to size and branching of the organisms. It appears that under ideal conditions, for example in the tissues of nonresistant patients with pulmonary tuberculosis, the bacillus grows for approximately twenty microns and then develops buds on either or both flanks. From the latter, offshoots form which in turn generate bud formation. Branchings of this nature continue. If, however, there is resistance on the part of the host, branching is less frequent and reproduction appears to depend on simple elongation. Shorter forms result and although small lateral offshoots are observed, they are in no wise comparable with the branchings observed under ideal conditions.—*The Tubercle Bacillus in Sputum: With Special Reference to Branching Forms, R. A. Hunter, Tubercle, November, 1941, 22: 257.*—(*E. H. R.*)

Gastric Culture.—A study is presented of readmission rates for patients discharged from Olive View Sanatorium after gastric lavage examination. Of 307 patients discharged before January 1, 1941, 16, or 5.2 per cent, have been readmitted. Those whose gastric lavage was negative before discharge show a readmission rate of 2.4 per cent, as compared to 17.4 per cent for those with a positive culture on discharge. Cavitation, and/or positive sputum, was present at the time of readmission in 6 of 10 patients who had been discharged with a positive gastric lavage culture and in 3 of 6 discharged with negative culture.—*The Significance of a Positive Gastric Lavage Culture on Discharge, J. L. Robinson, California & West. Med., Tuberculosis Supplement, July, 1942, 57: 41.*—(*Author's abstract.*)—(*G. C. L.*)

Fluorescent Microscopy.—An improvised light source for fluorescent microscopy is pre-

sented which consists of a 500-watt G. E. projection bulb operating on 110 to 115 volts, mounted in a ventilated sheet metal lamp box. A condenser can be obtained from an old arc light, but a pair of ten-cent store reading lenses in tandem has proved equally useful. This arrangement calls for only an ordinary commercial bulb of relatively low cost, plus the application of a little ingenuity in making the housing and dispenses with all special equipment, except the blue and yellow filters. Examination of fluorescent films stained with auromine-O is considerably easier than similar examination of Ziehl-Neelsen films, because of the wide field covered by the dry objective and because the organisms are either seen or not seen without confusion with their surroundings, provided the illumination is bright enough to cause brilliant fluorescence. This proviso is the reason the use of such a high-power lamp is recommended. Probably at least 95 per cent of the light from the bulb is stopped in the filter, and the near ultraviolet output of a filament bulb is not great in any case, so that a large initial energy input is needed if enough active light is to reach the film to cause bright fluorescence. Once the light has been put together and the adjustments of mirror and condenser completed, the system can be used indefinitely if no changes of position are made.—*Simplification of Fluorescent Microscopy, C. F. Graham, J. Lab. & Clin. Med., June, 1942, 27: 1188.*—(*F. G. P.*)

Pulmonary Function.—The arterial oxygen-saturation was studied by means of the photo-electric method. Examinations were done in normal persons and in patients with pulmonary and cardiac diseases. When breathing 21 per cent oxygen, the arterial oxygen-saturation was between 95 and 96 per cent in 60 per cent of the normal persons, between 93 and 97 per cent in 88.3 per cent of the normals. When breathing 17 per cent oxygen the oxygen saturation of the blood decreases from 95.5 to 94 per cent, when breathing 15 per cent oxygen the oxygen saturation falls to 88 per cent. In cases of bilateral tuberculosis, chronic bronchitis and lobar pneumonia, a diminished oxygen saturation of the arterial blood can be found even when the patient breathes 21 per cent oxygen. In several cases of this group it was found that the oxygen saturation of the arterial blood did not decrease more than in normals when low oxygen concentrations were given. The explanation for this finding may be that the arterialized blood coming from normal parts of the lung is mixed with blood coming from diseased parts of the lung where oxygenation of the venous blood is hampered. In cardiac patients with slight pulmonary congestion normal oxygen saturation can be found as long as the patient breathes 21 per cent oxygen. With lower oxygen concentration the oxygen saturation may diminish in a higher degree than in normals. The same was found in some cardiac patients who were not decompensated any more. Thickening of the alveolar walls (pneumonosis) may be the cause.—*Die Untersuchung der Lungenfunktion, M. N. J. Dirken, J. K. Kraan, H. Oostinga & S. Wondstra, Acta med. Scandinav., 1942, fasc. V–VI, 109 : 514.*—(*G. C. L.*)

Bronchospirometry.—This type of examination is now possible without discomfort to the patient using the double-barrelled rubber catheter of Gebauer or of Zavod. The examination is performed after a fast of at least 6 hours. Sedatives and atropine are rarely used. Saliva is drained by tilting the head forward and downward. Systematic anaesthetization of the fauces, glottis, trachea, and left main bronchus is carried out with 3 or 4 cc. of 2 per cent pontocain under indirect laryngoscopic observation using nebulizers for the upper passages and a catheter for the trachea and bronchus. The test catheter is introduced, using the laryngeal mirror, along the anterior mid-line until it reaches the trachea when it is turned so that the tip passes along the left side of the trachea into the left main bronchus. To avoid the sensation of choking, the patient is instructed to hold his breath from the time the tube enters the trachea until it is in place. The sleeves are then inflated under manometric control. When inflation is complete small oscillations

of pressure occur corresponding to the changes in diameter of the air passages with respiration. No air now passes through the mouth or nose. The apparatus has been previously tested on trachea and bronchi removed from a cadaver to determine the proper pressure. Contraindications to the procedure are ulcerative lesions or marked hyperplasia of the air passages traversed by the apparatus and sharp angulation at the beginning of the left bronchus. A double Benedict-Roth apparatus, with the bells made higher and narrower to give greater amplitude to the tracing, is used for recording. Thirty-four cases, including normals, cases of unilateral and bilateral tuberculosis, unilateral pneumothorax, thoracoplasty, atelectasis and fibrothorax were studied. In the main, results correspond to those of other authors. Minute respiratory volume, oxygen consumption, respiratory equivalent (ventilation per 100 cc. oxygen used) and vital capacity were measured. In general, the sum of the results obtained in the separate examination of each lung corresponded with the results of spirometry carried out in the usual fashion. A slightly lower vital capacity and slightly higher oxygen consumption found with separate studies are explained by the difficulty of making deep inspirations and slight nervousness on the part of the patient. The latter prevents complete relaxation and thus increases oxygen consumption. Where arterial oxygen saturation is complete, the measurement of oxygen consumption in each lung will determine the partition of circulation between two lungs. If one lung is made to breathe nitrogen alone, measurement of the arterial saturation before and after makes it possible to determine the circulatory value of each lung. The measurements described are being used both for scientific studies and for practical studies in cases where surgical collapse is contemplated and there is doubt as to the respiratory reserve.—*Examen funcional de cada pulmón por separado en tisiología, R. F. Vaccarezza, A. Lanari, A. E. Bence & F. Labourt, An. catedra de pat. y clin. de tuberc., June, 1941, 3: 5.*—(*H. B. S.*)

Volume of Lung after Pneumonectomy.—After lobectomy and pneumonectomy the empty pleural space is often completely obliterated. A number of factors contribute to this, among others the increase in volume of the remaining lung tissue. The increase in volume which follows immediately upon the operation (Rienhoff) may be due to emphysema or simple dilatation of the terminal respiratory units. Behrend and Mann have tried to explain the increase in volume as mobilization of reserve material in the lung, presuming a constant play of open and closed lobuli in the lung in analogy with the open and closed glomeruli of the kidney. The present investigation is intended to demonstrate that Behrend and Mann's assumption cannot be correct and that their histological pictures are misleading on account of inadequate technique. The authors' subjects have been mice which have been killed by strangulation, whereupon the lungs have been removed with ligated trachea. Everywhere in the lungs the authors found open alveoli, bronchioli and alveolar ducts. The same findings have been observed, even if the mice stayed, before the strangulation, in an atmosphere with an oxygen content of 70 per cent, which should considerably increase the possible reserve material. This, however, only caused a decrease in the size of all the alveoli. The explanation of the increase in volume following immediately upon the operation must therefore be the simple dilatation of the lobules suggested by Rienhoff. —*Increase in the Volume of the Remaining Lung following Lobectomy and Pneumonectomy, E. Husfeldt & H. H. Wandall, Acta chir. Scandinav., March, 1942, 86: 359.*—(*R. K.*)

Lung Function in Silicotics.—Exercise tests with a bicycle-ergometer were done in 12 patients with silicosis, in 9 patients with emphysema and in 14 healthy persons. The amount of exercise was 400 kgm./min. for ten minutes. All individuals reached the steady state after about five minutes of exercise. During the steady state the patients with first and second degree silicosis showed a slight average in-

crease in ventilation and respiratory rate as compared to the normals. Two patients with third degree silicosis showed no marked increase of ventilation. In emphysema patients there was a marked increase in ventilation. The oxygen debt in first and second degree silicotics was higher than in normals, more so in third degree silicotics and highest in the emphysema patients. The ventilation during the recovery period was also highest in the emphysema patients, lower in the silicotics and the lowest in the normals.—*Investigations of the Lung Function in Silicotics. The Lung During and After Moderate Muscular Exercise, E. Roelsen & P. Eskildsen, Acta med. Scandinav., 1941, fasc. III–IV, 109: 377.*—(*G. C. L.*)

Abdominal Binders and Lung Volume.—In this study pulmonary volumina were measured before and after the application of abdominal binders. When moderately tight binders were used, the decrease in pulmonary volumina ranged between 1 to 5 per cent in normal subjects. With tight binders the decrease may be up to 50 per cent. Of the subdivisions of total capacity, the reserve and the residual air are affected most. The complimentary air is only rarely decreased to any extent. Minute volume and tidal air are altered slightly, but the oxygen consumption remains the same or increases slightly. All changes are more marked in patients with congestive heart failure. It is therefore inadvisable to apply tight abdominal binders postoperatively, especially in patients with myocardial disease. Postoperative atelectasis is invited and the tendency to Cheyne-Stokes respiration is increased.—*Influence of Abdominal Binders on Lung Volume and Pulmonary Dynamics, M. Altschule & N. Zamchek, Arch. Surg., July, 1942, 45: 140.*—(*H. M.*)

Pulmonary Cavitation.—The author undertakes to correlate pathology, physical signs and X-ray appearance in the development of lung cavitation. In acquired bronchiectasis the pathology consists in chronically inflamed and slowly breaking and atrophying bronchi. In some parts only the epithelium will be affected; in others muscle and elastic tissue are fast disappearing; while in an advanced area every element in the bronchial wall is mixed beyond recognition into a dense fibrous mass and the ciliated columnar epithelim is beginning to show squamous-cell infiltration. Surrounding areas of the lung show compensatory emphysema. At this stage there is early clubbing of the fingers. The movement of the chest is heaving in the lower zones, owing to compensatory emphysema. Percussion note is impaired, but the overlying emphysema may very easily produce a deceptive tympany. Rhonchi and sibilant râles are heard throughout the inspiratory phase. In addition there are heard, both on ordinary breathing and after cough, fine to coarse sounds of a dry character. The X-ray film taken at this stage shows heavy, rather fluffy linear shadows towards both bases, irregular in their loss of translucency, but more or less faithful to the normal branchings of the larger bronchial bundles. The introduction of lipiodol would show enlarged bronchi slowly increasing in width from the upper border of the affected area downwards towards the bases, occasionally pulled into small nodular sacculations, and now and again without true definition in the shadows of their edges. The further stages constitute a picture of rapid deterioration. Marked clubbing of the fingers is the predominant clinical manifestation. Areas of atelectasis and pneumonitis, as well as increasing fibrosis, are noted. The X-ray film now reveals ill defined areas of loss of translucency; these are at first separate, then become confluent and correspond to areas of pneumonitis. Lipiodol examination now reveals gross sacculations. Physical signs are also altered with shift of the mediastinum to the affected or more affected side and the presence of coarse rhonchi. The author next considers lung abscess, the bronchogenic rather than the embolic type. The site of the lesion is far more often peripheral than central, and so immediately under the pleura that it is affected from the onset. Early the abscess

appears as a mushy gangrenous-looking area in the middle of bunches of alveoli occluded by typical pneumonic exudate. Physical examination reveals a definite lack of movement of the affected side and a fairly limited impairment of note. The diagnostic sign is a coarse pleural rub. When actual cavitation occurs the pleural rub either becomes very localized or disappears entirely, as the pleura becomes adherent and thickened. X-ray findings at this early stage may be entirely lacking. However, there soon appears a diffuse area of density. Towards the centre of the dense area a translucency becomes apparent and finally a fluid level may make its appearance. Pathologically the cavity wall is ill defined and ragged and is heavily infiltrated with large mononuclear phagocytes and polymorphs. The surrounding alveoli are filled with typical pneumonic exudate. Coarse metallic râles are the predominant physical finding at this stage. Should such a cavity not be evacuated, then, within three to four weeks dense fibrous tissue appears in its walls and there is organization of the pneumonic exudate. Bronchi become infected and bronchiectasis supervenes. Film now shows a well defined cavity wall usually containing a fluid level. Clubbing of the fingers now sets in quite rapidly. The progress of tuberculosis differs widely from that of both lung abscess and bronchiectasis. Until the caseous content of the acini breaks down they are completely silent areas. With disintegration and evacuation through the bronchiolus respiratorius the earliest stethoscopic sign of active tubercle presents itself in a fine sibilus heard in the second half of inspiration. Films taken before disintegration present rounded areas of loss of translucency —the "Assmann focus"—or more or less wooly patches not unlike bronchopneumonia. Two types of cavity formation are noted. The acute exudative process results in large, moth-eaten cavities with ragged outline. On the film such a cavity will appear as an area of comparative translucency among scattered patchy infiltrates. Physical signs consist in slight dulness and poor lung movement. The preponderant part of the infiltrated area is usually silent. Over the site of the vomica a very circumscribed coarse bronchitis is present, which gives the impression to the listener that it comes from the depths of the lung tissue, the bronchi being flooded with caseating exudate. In chronic fibrocaseous tuberculosis the round "Assmann focus" slowly loses its regular annular outline; its edge becomes confused, its loss of translucency is no longer uniform and its lower edges merge into shadows made by the increased blood supply of draining bronchi tracking towards the hilum. Fusion of these areas result in cavity formation. Fibrosis goes along with this process. Physical signs reveal displacement of the mediastinum to the affected side. With cavity formation coarse metallic râles are present, heard best in the last part of inspiration and persisting after cough. On X-ray films the chronic tuberculous cavity is represented by a fairly wide but always well defined wall with hazy borders beyond.—*The Correlation of Pathology, Physical Signs, and X-ray Appearances in the Development of Lung Cavitation, R. B. Trail, Brit. M. J., November 1, 1942, 2: 601.*—(*D. H. C.*)

Deaths from Bronchitis.—The author notes that there was a great increase of recorded mortality from bronchitis in London in 1940. During the period between January 7, and February 17, 1940, deaths from all causes exceeded the number expected on the basis of the same weeks in 1939 by 1,000, or nearly 33 per cent; those from bronchitis were 800 (10 per cent) in excess. In a normal year nearly 90 per cent of the deaths classed as due to bronchitis occur in ages over forty-five. It is therefore a cause mainly affecting those who have passed middle age and it rapidly increases in old age. After examining all factors, including the vagaries of registration and changes incurred by new laws for reporting principle causes of death, it is concluded that a large part of the increase was an artificial result of a change in the system of selecting one cause for classification from more than one cause stated in death certificates. In so far as it was real it occurred mainly at the beginning of the year—

the usual time for such deaths. It was definitely not due to any concomitant epidemic of influenza. Finally, it occurred, probably along with an excess over the expected number of deaths of all old people from other causes, during one of the most severe spells of weather London has experienced and should not be regarded as having been due to war conditions. —*Recent Mortality from Bronchitis in London, R. M. F. Picken, Brit. M. J., May 17, 1941, 1: 744.*—(*D. H. C.*)

Acute Bronchiolitis.—The author takes exception with many authorities who do not admit capillary bronchitis or acute bronchiolitis to be a clinical or pathological entity. He quotes Horder: "capillary bronchitis may well be termed the essential lesion of influenza." The study is based on 50 children admitted to the hospital with an acute respiratory infection during the first ten weeks of 1940 (a period of epidemic influenza). Twenty-seven were under the age of one year; 7 died—all of them under the age of two. The aetiological factor was epidemic influenza of the respiratory type. It was most often seen in children of the poorer classes. Various types of organisms were isolated—no consistent factor was found. Three autopsies are described and in each the following four essential features of experimental influenza were present: (*1*) more or less complete destruction of bronchiolar epithelium; (*2*) obstruction of the lumen of bronchi and bronchioles by a plug of "thick, tenacious, glassy, white mucous exudate"; (*3*) peribronchiolar cellular infiltration extending to the interstitial tissue of some of the neighboring alveoli; (*4*) alveolar sacs mostly free exudate, but some close to affected bronchioles contain a serous exudate with few cells. In addition, marked emphysema was a constant and pronounced finding in the human necropsies. No pneumonic consolidation could be found. The clinical onset is most often insidious with a day or two of slight temperature. The lesion soon extends to the larynx with hoarseness, aphonia and dyspnoea and stridor due to laryngeal spasm. Suddenly the child passes into the phase of acute bronchiolitis. Here the dominating feature is obstructive dyspnoea with incessant cough and increasing cyanosis. Physical examination reveals fine râles all over the chest with hyperresonant note due to the emphysema. The course varies considerably. There may be complete recovery in three days. Death is usually from obstructive dyspnoea and occurs on the second, third or fourth day. In the treatment of acute bronchiolitis four factors demand separate consideration—the infection, the obstructive dyspnoea, the cyanosis and the collapse. For the infection rapid, full dosage sulphapyridine is used and continued for one week. Steam-tents have been found to relieve the obstructive dyspnoea effectively. If an expert bronchoscopist is available bronchoscopic aspiration should be attempted. Cyanosis is relieved by means of oxygen through a nasal catheter delivered at the rate of 3 litres a minute. Prompt attention to the foregoing treatment will often obviate the necessity for treating the collapse. The author recommends coramine intramuscularly for collapse. —*Acute Bronchiolitis in Children, D. Hubble & G. R. Osborn, Brit. M. J., January 25, 1941, 1: 107.*—(*D. H. C.*)

Asthmatic Bronchitis.—From typical bronchial asthma which is characterized by typical attacks and freedom from symptoms between the attacks another form of asthmatic reaction has to be distinguished: the asthmatic bronchitis. Asthmatic bronchitis has two main symptoms: the asthma and the bronchitis. The asthmatic reaction in asthmatic bronchitis is less severe and of longer duration than attacks of bronchial asthma. The dyspnoea begins in an insidious manner, rises gradually in the course of some days, remains some time and subsides slowly. The bronchitis is not different from infectious bronchitis, but there are always eosinophilic cells in the expectorate. Four forms can be found: (*1*) primary bronchitis with secondary asthmatic reaction, (*2*) asthmatic bronchitis, afterwards complicated by attacks of bronchial asthma, (*3*) bronchial asthma, afterwards complicated by asthmatic bronchitis, (*4*) asthmatic

attacks which immediately pass over to asthmatic bronchitis. The blood picture often shows a leucocytosis; eosinophilia is always present. Allergic skin manifestations are frequent. The heart is usually normal. In 31 of 59 patients with asthmatic bronchitis, rhinitis or sinusitis was found. Emphysema is nearly always observed, pleural adhesions are common. Pneumonia occurs often. Two of 63 observed patients died from the asthmatic affection probably due to functional cardiopulmonary insufficiency. At autopsy no characteristic finding was seen. In many patients numerous and heterogeneous allergens give a positive skin reaction. Bacteriological investigation of the sputum of 37 patients was done. In 18 patients the normal saprophytes of mouth and throat were found; in 19 patients, in addition to the same flora, haemolytic streptococci, pneumococci, influenza bacilli, meningococci were seen. Autovaccines from the saprophytic and from the pathogenic microbes gave positive cutaneous reactions. Standard vaccines often give positive reactions too. Normal control persons may also react, but positive reactions are fewer and as a rule weaker. The bronchitis in asthmatic bronchitis is supposedly usually infectious, rarely allergic; the asthmatic reaction is due to an allergy to bacterial proteins and happens in a person who is constitutionally predisposed to asthmatic attacks. On the other hand, asthmatic attacks predispose to infection of the air passages. Bronchitis and asthma must be treated. The bronchitis is treated in the usual way. The treatment of the asthma consists of vaccination with autovaccines or with standard vaccines. Good results were seen from fever therapy, especially with injections of sulfur.—*Asthmatic Bronchitis. A Clinical, Pathogenetic and Therapeutic Study, M. S. Kobro, With Bacteriological Investigations, S. D. Henriksen, Acta med. Scandinav., 1941, Suppl. 125.*—(*G. C. L.*)

Bronchial Asthma.—The immediate treatment of an asthmatic attack consists of the injection of epinephrin. Occasionally simpler things will bring about cessation of the attack, such as smoking of a stramonium cigarette, breathing deeply, opening the window, change in position, inducing sneezing by taking snuff, etc. When attacks are severe the injection of 1 mg. of epinephrin may have to be repeated many times. For severe asthmatic states, 50 per cent glucose may be combined with epinephrin. At times artificial fever therapy may be of help, but frequently such results are only temporary and the attacks recur as soon as the fever subsides. As emergency measures, administration of oxygen by nasal catheter, or 20 per cent oxygen in 80 per cent helium or ether and oxygen anaesthesia are advised. While it is true that asthmatic attacks are rarely fatal, they may be so frequent and severe that they cause intense suffering. The thick mucus which accumulates in the bronchial tree during an attack may be the cause of atelectasis or infections. Bronchoscopic aspiration is advised in such cases. In every case of asthma, it is imperative to start vigorous treatment early. This includes a thorough search for the responsible agent. Pollen of grasses and trees, insects, fungi and plant parasites may be the cause if the attacks are seasonal. In perennial attacks, occupational dusts or house dust must be considered. The factor in dust allergy is usually a fungus contained in the dust. Perennial cases may also be due to food allergy. These cases are best treated by starvation for twenty-four hours, and then the diet is started with a known inert food, and one other food is added every two to three days. Occasionally asthma is caused by allergy to the bacterial flora of the patient's respiratory tract and vaccination with a polyvalent vaccine may be of help. Other measures which help an occasional stubborn case are change of climate, X-ray therapy, ketogenic diet and desensitization with tetanus antitoxin.—*Die Behandlung des Bronchialasthmas, C. Diaz, Schweiz. med. Wchnschr., February 21, 1942, 72: 205.*—(*H. M.*)

Nitrogen Oxide Poisoning.—Clinical picture and pathological-anatomical findings in poisoning with vapor containing various nitrogen oxides (NO, NO_2, N_2O_3, N_2O_4, N_2O) are similar

to phosgene poisoning. Two cases are described. In the first case the poisoning occurred in a man during welding with acetylene in a badly ventilated room. Symptoms and signs were those of a bronchitis. On X-ray examination extensive bronchopneumonic foci were seen in both lungs. The electrocardiogram revealed an insufficiency of the right coronary artery. A polycythaemia of short duration was observed. All the symptoms and signs had disappeared after seven days. In the other case the patient suffered from poisoning due to inhalation of a reddish-yellow gas which had been formed after a transformer had been struck by a bolt of lightning. Symptoms and signs were similar to those found in the first patient; however, X-ray examination revealed lung infiltrations which were similar to miliary tuberculosis. The patient recovered completely after one and a half months. It is assumed that in both cases a toxic pulmonary oedema was present, caused by the inhalation of various nitrogen oxides. The patients were reëxamined after one and a half years and one and a quarter years, respectively, and were found healthy.—*Über passagere Lungenaffektionen bei Vergiftung mit nitrosen Gasen, (Klinische und röntgenologische Beobachtungen), N. Ahlberg & K. Dahlberg, Acta med. Scandinav., 1942, fasc. 5-6, 109: 471.*—(*G. C. L.*)

Pulmonary Aspergillosis.—A case of pulmonary aspergillosis is presented with a discussion of the mode of infection, pathology, symptomatology, X-ray picture, diagnosis and treatment. Diagnosis of aspergillosis must be made only when all other possible aetiological factors are ruled out. The finding of aspergillus in the sputum is not sufficient evidence for making such a diagnosis. Culturing the organism, the reproduction of the lesion by means of animal inoculation, and the reisolation of the fungus are important factors in clinching the diagnosis. The presence of agglutinins in the patient's serum and positive skin reaction to stock or autogenous vaccines are additional aids in the diagnosis, although their value is questioned by some authorities. In the treatment of pneumonomycosis in general, a multitude of agents have been used. The same is true of the treatment of aspergillosis. The time-honored remedy employed in the condition is potassium iodide; other medicaments often used are the inhalation of ethyl iodide, neoarsphenamine intravenously, intramuscular bismuth, sodium iodide intravenously and roentgen ray. Of course, the presence of concomitant pulmonary tuberculosis contraindicates the use of iodides. There is no specific drug. Pneumonomycosis should be considered in any patient with pulmonary symptoms.—*Pulmonary Aspergillosis, J. M. Donaldson, Jr., C. J. Koerth & R. G. McCorkle, J. Lab. & Clin. Med., March, 1942, 27: 740.*—(*F. G. P.*)

Amyloidosis of Lungs.—Amyloid disease, as is well known, usually follows certain chronic diseases, such as tuberculosis, and is characterized by massive and easily recognized lesions of the spleen, liver, kidneys and adrenal glands. This is the secondary and typic form. It is less well known that there are rare, atypic, so-called primary forms of this disease which are seldom recognized clinically. The criteria for this atypical group were pointed out by Lubarsch and are: (*1*) almost complete absence of amyloid in organs most involved in typical amyloidosis, such as spleen, liver and kidneys; (*2*) presence of amyloid in organs and parts not usually involved, such as heart, lungs and skin; (*3*) the occasional occurrence of tumor-like nodules of amyloid; (*4*) the frequent failure of the deposits to react to the specific stains for amyloid; (*5*) the absence of a preceding or concomitant disease to which the presence of amyloid may be ascribed. A case of primary amyloidosis is reported in which the distribution of amyloid was systemic but massive only in the lungs and to some extent the skin. The condition is rare and is seldom diagnosed clinically. The diagnostic importance of lesions of the tongue and skin is stressed.—*Primary Amyloidosis of the Lungs, S. W. Sappington, J. H. Davis & J. A. Horneff, J. Lab. & Clin. Med., April, 1942, 27: 882.*—(*F. G. P.*)

Hay Fever Therapy.—The assertion has been made that metabolic products of the colon bacillus have therapeutic value at least equal to that of specific inoculation in allergy. After investigating the manufacturing process of Coli Metabolin (Tosse), and finding no contraindication to its use, the authors treated 20 ragweed-sensitive patients with the product. The general plan was to give each patient 2 cc. of Metabolin under the skin daily until five or more doses had been taken or relief of symptoms occurred. As many as twelve consecutive injections were given at daily intervals in some instances. Although a degree of short lived improvement was observed among the 20 patients given an average of nine inoculations of Metabolin, a cure resulted in no instance and the transient benefits were duplicated both in degree and in duration by injections of physiological solution of sodium chloride. Since the incidence of improvement was significantly greater when either solution was injected than when no treatment at all was given, it was concluded that there is no valid place for Coli Metabolin in the therapy of hay fever.—*"Coli Metabolin" Therapy in Hay Fever: Psychogenic Benefits, Mary H. Loveless & H. S. Baldwin, J. A. M. A., February 7, 1942, 118: 451.*—(*G. L. L.*)

Coccidioidal Pulmonary Cavitation.—Seventeen cases of pulmonary cavitation due to coccidioidal infection were seen. Coccidioidal cavities are usually solitary and thin walled with little or no surrounding parenchymal reaction. The disease is endemic in certain areas. Nine out of 17 cases had haemoptyses. All reacted to the intracutaneous coccidioidin test. *Coccidioides immitis* was isolated from the pulmonary secretions of all patients. In 15 cases circulating antibodies could be demonstrated. Two cases with excessive bleeding were successfully treated with pneumothorax. In one patient a thick walled cavity was closed after pneumothorax treatment of two years. In 2 cases the cavities were not closed after pneumothorax treatment of two and one-half years and six months, respectively; both cavities closed spontaneously after reëxpansion of the lungs. Twelve cases received no collapse therapy; of these, 5 closed their cavities spontaneously. Conservative treatment is indicated during the primary phase of coccidioidal infection. No acute or chronic dissemination occurred.—*The Treatment of Pulmonary Cavitation Due to Coccidioidal Infection, W. A. Winn, California & West. Med., Tuberculosis Supplement, July, 1942, 57: 45.*—(*G. C. L.*)

Pulmonary Changes in Electric Arc Welders.—Since 1936 there have been several reports in the literature of roentgenographic pulmonary changes in electric arc welders. The roentgenographic abnormalities, discovered by surveys on apparently healthy workers, ranged from increased hilar shadows to a generalized fine or nodular mottling simulating silicosis. The workers had no symptoms and were not disabled in any way. There was a history of long exposure to the products of arc welding, usually fifteen years or more. The roentgenographic changes were apparently produced simply by the accumulation of iron pigment. Fumes arising from coated rods are largely inorganic material consisting of finely divided iron oxide. The author reports the case of a thirty year old white man, an arc welder for seven years, admitted to the hospital with cough, sputum and dyspnoea. The admission roentgenogram showed multiple linear and nodular densities traversing the middle third of the right lung from the root out to the periphery. There was also some exaggeration of the linear markings of the left lung. The tentative diagnosis, on admission, was bronchogenic carcinoma with lymphangitic spread. Bronchoscopy revealed a considerable amount of purulent material in the lower part of the trachea. There was an ulcerated granulating lesion in the right main bronchus just below the tracheal bifurcation; a large amount of nonfoul purulent secretion was seen distal to this lesion. Sections of this granulation tissue, removed by biopsy, showed nonspecific inflammatory changes with large masses of iron pigment scattered about. Removal of the granulation tissue and repeated bronchoscopic

dilatation of the left main bronchus gradually secured satisfactory symptomatic relief and healing of the ulcerated area. Bronchial lesions accompanying chronic pulmonary changes in electric arc welders have not been previously reported. The mechanism whereby these bronchial changes were produced is not clear.—*Chronic Pulmonary Changes and Bronchial Ulceration in an Electric Arc Welder, H. R. Nayer, J. A. M. A., August 29, 1942, 119: 1500.*—(*G. L. L.*)

Shattering of Particles by Impinger.—An analysis of existing data on shattering of particles by impingement-type instruments shows no conclusive evidence of shattering. Results which indicate shattering may be due to inadequate precautions against selective sampling or to the failure to size all the particles and the use of higher than specified impingement velocity. Experiments showed no shattering of discrete small glass spherical particles and no significant change in the mean particle size of ground flint at the normal sampling rate. Aggregates were observed in both original and impinged samples. The number of aggregates did not appear to be significant.—*Shattering of Particles by the Impinger, L. Silverman & W. Franklin, J. Indust. Hyg. & Toxicol., April, 1942, 24: 80.*—(*T. R. J.*)

Silica in Diagnosis of Silicosis.—In medicolegal circles there is a growing tendency to attach unwarranted significance to the quantity of silica in tissues. Lungs from 150 individuals were analyzed. The results indicate that the amount of total silica in the tissues does not parallel the extent or the severity of tissue reaction in individual cases. Although in general, the silicotic lung tends to contain more total silica than the nonsilicotic one, there is no particular quantity above which most of the positive cases occur. The frequently quoted minimal value of 1 per cent of silica in dry lung is not a valid criterion for the presence of silicosis. Attempts to correlate the amount of ash and of silica in the silicotic lungs with the character of the dust and the length and nature of their exposure are rarely successful. The admixture of inert silicates with the inhaled quartz is one influencing factor. In addition, individuals vary in the effectiveness of their protection against dust. Since it is the free silica which is capable of causing silicosis, it is the only logical basis of comparison. Chemical methods and X-ray diffraction permit the differentiation of free and combined silica in the same mixture. Thirty silicotic lungs have been analyzed for both forms of silica. This number was regarded insufficient from which to learn if a satisfactory correlation with tissue reaction will be possible but evidence suggests that it may not. The use of dry lung tissue as a basis for comparing silica values is unsatisfactory because pathological reactions in the lung alter its structure and specific gravity. Experiments on animals demonstrate that during the course of prolonged exposure to quartz, the quantity of silica in both lungs increases until fibrosis has developed after which the percentage of silica in the dry lungs steadily decreases. It is felt, therefore, that the present methods of expressing results do not reflect the true differences in the quantities of silica in massive fibrous areas and in more normal lung tissue. Another factor which may reduce the significance of any amount of free silica in the lung is the action of inhibitor substances. Animal experiments demonstrate that any mechanism which completely coats the surface of quartz particles will absolutely prevent stimulation of connective tissue. There is no real knowledge of such action in the human subject but theoretically it might occur and in some of the cases presented, it was suspected. Chemical analysis may be useful in disclosing the cause of the fibrosis in complicated cases, where no silica exposure has been suspected but the diagnosis of silicosis still must remain on a morphological basis.—*The Significance of Chemical Examination in the Diagnosis of Silicosis, L. U. Gardner & A. J. Redlin, J. Indust. Hyg. & Toxicol, June, 1942, 24: 125.*—(*T. R. J.*)

Solubility of Silicates.—Experiments on the solubility at 36.9°C. of quartz, orthoclase feld-

spar and muscovite mica suspensions of particle size comparable to the dust in mine air are described. The conditions of preparation of the samples have been carefully controlled and interfering factors reduced to a minimum. The results from a study of the varying pH, particle size and methods of preparation on the rate of solution of the particles are tabulated in detail. The initial rate of solution depends on many factors but the final rate may be proportional, or nearly so, to the radius. The rate of solution tends towards a slow constant value after a few weeks and it would seem that this gives the true solubility of the undisturbed surface of the particles. When particles are formed by grinding, the crystalline structure of the surface is disturbed and a layer of irregular structure, the Beilby layer, is formed. The amount of Beilby layer increases with the amount of grinding and small particles may consist largely of this irregular structural material. In small particles the edges may form a considerable fraction of the total mass. It was felt that the initial high rate of solution is due mainly to the Beilby layer and "edge" effects.—*The Rate of Solution of Particles of Quartz and Certain Silicates, P. H. Kitto & H. S. Patterson, J. Indust. Hyg. & Toxicol., April, 1942, 24: 59.*—(*T. R. J.*)

Cancer of Lung.—The author has reviewed his cancer material to present a study of cases of long duration and case reports of 11 patients, all proved histologically, with a duration of more than two years. The ages ranged from forty to seventy. The high incidence of cancer in men over forty offers aid in differentiating the slowly growing tumors from adenoma, since nearly two-thirds of patients with adenoma have symptoms before forty and the same proportion are female. It is noteworthy that 10 of the 11 patients had epidermoid carcinoma, while only one had alveogenic carcinoma. The duration from the time of onset of symptoms until diagnosis averaged ninety months. The duration from diagnosis to death or to the time of this report averaged only seven months. Peripheral circumscribed carcinoma seems to be of longer duration than carcinoma in a large bronchus. In only 2 of the patients could the tumor be classed as central; in the remaining 9 it was peripheral. The spread of these tumors was definitely less than that usual for cancer of shorter duration. Extrathoracic metastases were demonstrated in only 3 of the 11 cases. One of the patients is still alive two years after a biopsy showing cancer in supraclavicular lymph nodes. Although the operability of such tumors is apt to be less in the stage seen at necropsy than in that observed at exploratory laparotomy, the tumor in 5 of the 11 cases might have been resectable at the time of post-mortem examination. Empyema and abscess occurred in 5 cases long before the diagnosis was made. When a pulmonary abscess is drained surgically, biopsy of its walls may show occult carcinoma. Like bronchoscopic examination, roentgen examination does not prove the diagnosis in the majority of cases of peripheral tumor; thoracoscopy and exploratory thoracotomy are necessary. The delay in diagnosis was due to the inadequacy of bronchoscopic and roentgen examination to demonstrate early small peripheral tumors, particularly when empyema and abscess complicated them. Exploratory thoracotomy to confirm the suspicion of cancer is a logical procedure and should be used as readily as is exploration for suspected abdominal cancer. Lobectomy for abscesses of the lung possibly associated with carcinoma is a logical procedure, which should bring about removal of some early cancers when substituted for surgical drainage.—*Carcinoma of the Lung of Long Duration, A. Goldman, J. A. M. A., January 31, 1942, 118: 359.*—(*G. L. L.*)

Cancer of Lung.—The authors present the results of a study of the clinical and pathological features of 56 histologically proved cases of bronchogenic carcinoma. Eighty-eight per cent of the patients were male and the average age fifty-six. The average interval from the onset of the present illness to hospitalization was six and six-tenths months, and the average duration from hospitalization until the time of death three and one-tenth months. It is

apparent that the disease had consumed on the average two-thirds of its span before hospitalization occurred. Moreover, in 22 cases the duration of life in this second phase was one month or less. Such figures indicate the urgent need for an intensive early diagnosis educational campaign. The ante-mortem diagnosis can be facilitated by X-ray studies and biopsy procedures. There is no roentgenological shadow which is absolutely pathognomonic, but the most commonly encountered appearance is that of a unilateral density which radiates outward from the hilum. As the disease progresses this density usually becomes lobar or multilobar in extent. In 7 instances a definite abscess cavity was noted on the film. Mediastinal widening was seen in 9 cases. One patient had a spontaneous pneumothorax on the side of the tumor. In 9 cases incorrect final ante-mortem diagnoses were made, and in 3 cases, hospitalized less than one day, the diagnosis was made at autopsy. In the remaining 44 cases, or 80 per cent, an accurate clinical diagnosis was made. The high incidence in males was particularly noteworthy. While the usual mode of onset was insidious, 30 per cent showed an atypical onset. The cases have been classified from a roentgenological point of view into three groups: hilar, peripheral and diffuse nodular carcinomatosis. From a histopathological point of view the 37 cases that came to autopsy were listed as epidermoid carcinoma, adenocarcinoma, undifferentiated carcinoma and mixed type. No significant correlation was noted in the series between the clinical course and the histology of the tumor. The present outlook indicates that thoracic surgery (lobectomy or more often pneumonectomy) offers the best chance for cure.—*Primary Carcinoma of the Bronchus: An Analysis of Fifty-six Cases, T. J. White, S. Cohen, A. M. Gnassi & P. Price, J. A. M. A., March 14, 1942, **118:** 862.*—(*G. L. L.*)

Intrathoracic Tumors.—Contrary to the prevailing impression, the majority of circumscribed intrathoracic neoplasms are intrapulmonary and malignant. Many circumscribed extrapulmonary neoplasms are malignant, and those that are benign may undergo malignant degeneration or cause disability or serious complications as a result of increase in size. Except for those bronchogenic and oesophageal carcinomata that yield endoscopic biopsy material and those neoplasms that have metastasized, a preoperative determination of malignancy or benignancy cannot be made with reasonable accuracy. Needle aspiration biopsy is not advised unless the patient's general condition is so poor that operation would not be performed unless the tumor was known to be malignant. Since delay in the removal of malignant neoplasms may result in their becoming inoperable and since benign neoplasms are potentially dangerous, virtually all presumably removable neoplasms should be promptly operated on, even though they may, at the time, not be producing troublesome symptoms. The only proper use of high voltage roentgen therapy is as a therapeutic test for lymphoblastoma or for palliation in inoperable malignant neoplasms. The use of roentgen therapy for other purposes is useless and, because of the loss of valuable time in those cases that happen to be malignant, dangerous.—*Circumscribed Intrathoracic Neoplasms, J. Alexander, J. A. M. A., May 30, 1942, **119:** 395.*—(*G. L. L.*)

Intrabronchial Metastatic Hypernephroma.—In the majority of cases roentgenoscopic appearance is characteristic of a metastatic pulmonary malignant lesion and, even though metastatic nodules may be numerous and large they seldom produce physical signs or symptoms of pulmonary disease unless the pleura is invaded. In contrast to metastatic lesions, a primary malignant lesion in the lung usually arises in one of the larger bronchi and produces characteristic physical signs and symptoms even when the tumor is small. Primary lesions usually produce obstruction of a bronchus with resulting atelectasis. Secondary deposits from the primary tumor are seldom observed roentgenologically in other portions of the affected or opposite lung. Adenocarcinoma of the kidney, however, is one type of

tumor that may be associated with secondary deposits in the lumen of a bronchus, producing physical signs and symptoms identical with those caused by a primary bronchial growth. The authors report a case in which the primary renal growth was symptomless and was unidentified until after bronchoscopic examination. Usually the renal growth has been diagnosed prior to the intrabronchial metastasis. Roentgenoscopic examination in this sixty-nine year old case revealed infiltration in the hilar area of the right lung with discrete nodules at the base and periphery of the right lung. The significant physical findings were the presence of wheezes and diminution of breath sounds over the lower lobe. Bronchoscopic examination revealed an ulcerating, pedunculated tumor in the bronchus of the lower lobe of the right lung. A second biopsy examination, with considerable improvement having followed the first bronchoscopy, revealed the correct diagnosis, and subsequent examination of the right kidney revealed a mass twice the size of the normal kidney.—*Intrabronchial Metastasis of Hypernephroma Simulating Primary Bronchial Carcinoma, C. D. Nofsinger & P. P. Vinson, J. A. M. A., July 18, 1942, 119: 944.*—(*G. L. L.*)

Empyema and Sulfonamides.—The dramatic effects of the sulfonamide derivatives in the treatment of pneumonia has invited investigations concerning the effects of these drugs on empyema. To date the authors have observed cases of postpneumonic empyema which had been treated from the beginning of the illness with one of the sulfonamides. In all of the cases surgical drainage was instituted as soon as frank pus was obtained by thoracocentesis. The transition from effusion to frank pus was prolonged in the cases in which sulfonamide therapy was employed. For comparative purposes a similar series of 29 cases of postpneumonic empyema not treated with any of the sulfonamides has been studied. A review of the literature makes apparent the reduction in the incidence of this complication since the introduction of sulfonamide therapy in the pneumonias. Although the incidence is much less, the authors believe that the empyema when it does occur is very apt to be atypical and more difficult to treat satisfactorily. The series observed demonstrates differences far greater than can be explained by the many variables presented by the disease uninfluenced by sulfonamide therapy. There is a decided tendency to peculiar pocket formation with delayed reëxpansion of the lung and obliteration of the empyema pocket. The number of secondary drainage operations is increased. The authors feel that, once the pulmonary process is under control and pus has formed in the pleural space, sulfonamides should be discontinued.—*Empyema Thoracis and Sulphonamides, T. H. Burford & B. Blades, J. A. M. A., March 21, 1942, 118: 950.*—(*G. L. L.*)

Cystic Fibrosis of Pancreas.—Cystic fibrosis of the pancreas, first described by Landsteiner in 1905, should be thought of when a chronic respiratory infection extending from the tip of the nose to the alveoli, with sputum and a negative tuberculin reaction, is found in a child under two years of age. Three cases were seen. The symptoms were chiefly those of early failure to gain on an adequate diet, with steatorrhoea, and intermittent or chronic respiratory infection. The pathological conditions present are a primary fibrotic or cystic pancreas, bronchiectasis, chronic pneumonia. Osteoporosis may occur. The treatment consists of supplying pancreas enzymes and large amounts of vitamin A.—*The Pulmonary Aspects of Cystic Fibrosis of the Pancreas, L. B. Dickey, California & West. Med., Tuberculosis Supplement, July, 1942, 57: 41.*—(*G. C. L.*)

Fibrosis of Spleen in Lupus Erythematosus.—The concept of disseminated lupus erythematosus as a generalized disease, rather than a local process, has grown rapidly in recent years. It is now clear that the disease, in addition to its cutaneous manifestations, affects connective tissue throughout the body, whose local manifestations depend on the spe-

cial response of individual organs and the intensity of the reaction in the individual patient. The lesions found in the skin, the kidneys and the heart in disseminated lupus erythematosus are now familiar. The changes in the spleen, however, have received little attention. The present study is devoted primarily to the description of periarterial fibrosis of the spleen and to an investigation of its specificity for disseminated lupus erythematosus. The splenic lesions in 18 cases of this disease are reported. Perisplenitis and periarterial fibrosis were the commonly observed lesions. Periarterial fibrosis was found in 15 of the 18 cases in this series. The perisplenitis presented no characteristics by which it could be differentiated from that commonly seen in other conditions. Periarterial fibrosis is defined herein as the occurrence of at least three separate layers of the normally densely packed periarterial collagen of penicillary and follicular arteries, in such a manner as to give the typical ringed appearance. The collagen is frequently hyaline and granular eosinophilic material may be found continuous with it. The process apparently is an alteration of collagen independent of necrosis or inflammation. No early or intermediate stages have been observed. In a control series of 1,679 splenic sections periarterial fibrosis occurred in 53 cases, an incidence of 3.2 per cent. No evidence of the occurrence of disseminated lupus erythematosus could be found in any of these cases. Periarterial fibrosis occurred in 4 cases of essential thrombocytopenic purpura out of 13 examined, an incidence of 31 per cent. This is the only group besides the cases of lupus erythematosus which significantly differed from the control series. The splenic lesions of disseminated erythematosus are not pathognomonic of that disease, although periarterial fibrosis occurs in a very high proportion of the cases. There are no known characteristics of the splenic periarterial fibrosis found in disseminated erythematosus which will distinguish it from that found in other conditions. In view of its frequent occurrence in this disease the discovery of the lesion at autopsy should raise a suspicion of disseminated lupus erythematosus and provide impetus for further investigation. (Reproductions of photomicrographs accompany the article).—*The Specificity of Periarterial Fibrosis of the Spleen in Disseminated Lupus Erythematosus, I. H. Kaiser, Bull. Johns Hopkins Hosp., July, 1942, 71: 31.*—(*J. S. W.*)

Erythema Nodosum and Lymphogranuloma Venereum.—*Erythema nodosum* may occur with various diseases, for instance with *Lymphogranuloma venereum.* It is seen at the time when the skin allergy appears. Intracutaneous or intravenous injection of Frei's antigen, which affects the allergic state of the organism, may cause the development of *erythema nodosum.* It develops sometimes after surgical procedures on the diseased lymph nodes. It has also been observed in San Joaquin Valley fever. Erythema nodosum is a morphological but not an aetiological unit. It is the result of an allergic reaction of the skin to various allergens which reach the skin by way of the blood.—*Das Erythema nodosum-Problem im Lichte des Lymphogranuloma inguinale, S. Hellerström, Acta med. Scandinav., 1941, fasc. I–II, 109: 1.*—(*G. C. L.*)

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